UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14 and 21-37* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14 and 21-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 14 and 21-37 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claim 14, 21, 23-30, 36 and 37 is rejected under 35 U.S.C. 102(b) as being anticipated by Cassiano (US PG Pub 2002/0110395).

For claims 14 and 25: Cassiano teaches a printhead assembly comprising a printhead **20** arranged to print on an image-receiving substrate (see Fig. 5, printhead **20** is shown, clearly capable of printing on an image-receiving substrate which is not shown, but a printhead is implicitly meant to print on substrate, see paragraphs 32-33 for description of the printhead **20**), a platen **45** (see Fig. 5, and paragraph 36, the platen is described as bar **43**, but constitutes a frame or support portion **43** and a surface which qualifies as a platen **45**), a support **18** (see Fig. 5, and paragraph 30, bar **18** supports the printhead **20** through print carriage **19**), a first frame **31** slideably connected to said support **18** (see Fig. 5 and paragraph 32, the first frame **31** is a cross-piece which slides on the support **18** as part of carriage **19**), one of said printhead **20** and said platen **45** being mounted on said first frame **31** (see Fig. 5, the printhead **20** is

mounted on the first frame **31**), a second frame **43**, the other one of the printhead **20**

and the platen **45** being supported on said second frame **43** (see Fig. 5, the platen is

the surface of and thus supported by the portion **43**), a driver **35** for driving said first

flame **31** relative to said support **18** to cause the one of said printhead **20** and platen **45**

to move in a linear direction toward the other (see Fig. 3, and paragraph 42, the wheel

35 commands movement of the printhead **20** and thus also the integral frame **31** in a

vertical fashion, which makes it relative the support **18** and towards the platen surface

45), and a compressor **53, 55** arranged to exert a biasing force on one of said printhead

20 and said platen **45** (see Fig. 5 and paragraph 43, the compressor supports the platen

and platen surface **45**), when said driver **35** drives said first flame **31** relative to said

support **18** (see Fig. 5, the compressors are always supporting the platen surface **45**),

wherein the compressor **53, 55** is arranged so as to compressibly support the second

flame **43** (see Fig. 5, the compressors also support the portion of the platen constitute a

frame element **43**). Specifically, for claim 25, Cassiano teaches the method comprising

driving the first frame **31** relative to the support **18** to cause the printhead **20** and the

platen **45** to move relative to each other and the compressor **53, 55** exerting a biasing

force on the platen **45** when the first frame **31** is driven relative to the support **18** (see

paragraph 42, the wheel **35** commands the movement of the printhead **20** with respect

to the carriage **19** and thus also the support **18** connected to the carriage **19**, the

vertical movement of the printhead **20** moves it relative to the platen, in paragraph 43,

the platen **45** and its frame **43** lowers and thus presses against the compressor **53, 55**

when the document is of a size that requires movement of both the printhead **20** and the

platen **45**, furthermore, the platen **43** is constantly biased against the compressor **53, 55**

by its innate weight).

For claim 21: Cassiano teaches the printhead assembly of claim 14. The

additional recitation in claim 21 can be interpreted as intended use language since the

language is directed to a method steps within the apparatus claim. Additionally, the

printhead **20** is shown as mounted on the first frame **31** (see Fig. 5), and driving the first

frame **31** downward relative to the support **18** would cause the compressor **53, 55** to be

compressed as a result of a force when the printhead **20** abuts a substrate between the

substrate and platen **45** and the force is transferred to the platen **45** (see Fig. 5).

For claim 23:   Cassiano teaches a printhead assembly comprising an input

device **35** for inputting data (see paragraph 42, wheel **35** is in contact with the paper

and provides the device information about the thickness of the paper, in addition to

causing the printhead and platen to adjust accordingly, the contact portions of wheel **35**

can be considered input devices for inputting data, while the physical structure is also a

driver for conveying force to adjust the printhead as later described), a printhead **20**

arranged to print on an image-receiving substrate (see Fig. 5, printhead **20** is shown,

clearly capable of printing on an image-receiving substrate which is not shown, but a

printhead is implicitly meant to print on substrate, see paragraphs 32-33 for description

of the printhead **20**), a platen **45** (see Fig. 5, and paragraph 36, the platen is described

as bar **43**, but constitutes a frame or support portion **43** and a surface which qualifies as

a platen **45**), a support **18** (see Fig. 5, and paragraph 30, bar **18** supports the printhead

20 through print carriage **19**), a first frame **31** slideably connected to said support **18**

(see Fig. 5 and paragraph 32, the first frame **31** is a cross-piece which slides on the

support **18** as part of carriage **19**), one of said printhead **20** and said platen **45** being

mounted on said first frame **31** (see Fig. 5, the printhead **20** is mounted on the first

frame **31**), a second frame **43**, the other one of the printhead **20** and the platen **45** being

supported on said second frame **43** (see Fig. 5, the platen is the surface of and thus

supported by the portion **43**), a driver **35** for driving said first flame **31** relative to said

support **18** to cause the one of said printhead **20** and platen **45** to move in a linear

direction toward the other (see Fig. 3, and paragraph 42, the wheel **35** commands

movement of the printhead **20** and thus also the integral frame **31** in a vertical fashion,

which makes it relative the support **18** and towards the platen surface **45**), and a

compressor **53, 55** arranged to exert a biasing force on one of said printhead **20** and

said platen **45** (see Fig. 5 and paragraph 43, the compressor supports the platen and

platen surface **45**), when said driver **35** drives said first flame **31** relative to said support

18 (see Fig. 5, the compressors are always supporting the platen surface **45**), wherein

the compressor **53, 55** is arranged so as to compressibly support the second flame **43**

(see Fig. 5, the compressors also support the portion of the platen constitute a frame

element **43**).

For claim 24: Cassiano teaches the printer of claim 23 and further teaches that

the driver **35** is configured to drive the first frame **31** to a predetermined position relative

to the support **18** based on the input data (see Fig. 3 and paragraph 42, the driver **35**

determines the thickness of the paper, being the input data, by contact, and then forces

the printhead **20** and first frame **31** to be move accordingly).

For claim 26: Cassiano teaches the method of claim 25 wherein the driving comprises driving the first frame **31** relative to the support to a predetermined position (see the length of the driver leg connected to wheel element **35** as shown in Fig. 3 predetermines the position that the frame and printhead **20** are moved to for any given paper).

For claim 27: Cassiano teaches the method of claim 25 wherein the driving is done in accordance with information stored with the image receiving substrate (see Fig. 3, and paragraph 42, the thickness of the paper determines the driving, and the thickness of the paper is the information which is innately stored in the substrate).

For claim 28: Cassiano teaches the printhead assembly of claim 14. The additional recitation in claim 28 is a recitation of intended use and does not further structurally limit the claim. Additionally, the driver mechanism **35** in Cassiano drives the frame based on the thickness of the substrate, which is information intrinsic to the substrate, and thus can be considered information stored on the substrate.

For claim 29: Cassiano teaches the printhead assembly of claim 14. The additional recitation in claim 29 is a recitation of intended use and does not further structurally limit the claim. Additionally, the driver mechanism **35** in Cassiano drives the frame based on the thickness of the substrate and contacts the substrate to determine the thickness, thus, the contacting wheel can be considered in input device for inputting information being the thickness of the substrate through a contact and direct force transfer.

For claim 30: Cassiano teaches the printhead assembly of claim 14. The additional recitation in claim 30 is a recitation of intended use and does not further structurally limit the claim. However, the driver **35** is taught to drive the frame **31** and printhead **20** to a position where the separation is appropriate for printing, which can be considered a predetermined position.

For claim 36: Cassiano teaches the printhead assembly of claim 14 and further teaches that the second frame **43** and the support **18** are connected to each other, since particularly, all of the elements of the assembly are connected to each other (see Fig. 1). The second frame also rests in a movable vertical fashion on the compressor **53, 55** (see Fig.5) and is thus vertically slidable which makes it slidable with respect to the position of the support **18** (see Fig. 5).

For claim 37: Cassiano teaches the printhead assembly of claim 14 and further teaches a base **59** (see Fig. 5) on which the second frame **43** being the base of the platen surface **45** is mounted on, with the compression spring **55** being arranged between the base **59** and the second frame **43** (see Fig. 5).

4.   Claim 22 and 31-35 rejected under 35 U.S.C. 102(b) as being anticipated by Regev et al. (US PG Pub 2002/0044811).

For claim 22 and 34: Regev et al. teaches a printhead assembly comprising a printhead **13** arranged to print on an image-receiving substrate **8** (see Fig. 1A and paragraph 19), a platen **120** (see Fig. 1A, the platen is arranged under the substrate **8**, and Fig. 7, which gives a better view of the platen recited as a table surface), a support **18** (see Fig. 1A, being the leg of the table), a first frame **240A, 240B, 260** (see Fig. 7,

the first frame is for holding up the platen **120** and thus rests on the support **18**, as clear

in Fig. 1A, the first frame (see Fig. 7 and 8, particularly the honeycomb structure below

the table **120** in Fig. 8, moves up and down to control the height of the table and is thus

slidable with respect to the support **18**, see paragraphs 56-64 for a detailed description

of the height adjusting mechanism), a driver **160, 180** for driving the first frame relative

to the support **18** in accordance with information stored with the image receiving

substrate, to cause one of the printhead and platen to move in a linear direction toward

the other (see Fig. 7, and paragraphs 56-64, the platen **120** particularly moves towards

the printhead **13**, the information stored in the substrate in this case is simply the

information intrinsic to the substrate, being its thickness), and a processor **160, 240**

configured to use a lookup table (see paragraph 56) to determine a distance to drive the

frame relative to the support **18** (paragraph 56, the processor uses information about

the substrate and a look-up table to determine how much to move the platen table **120**

based on the substrate thickness). Specifically for claim 34, the method comprises

using a look-up table to determine the distance to drive the first frame relative to the

support based on the information stored on the substrate (see paragraph 56-65, the use

of a look-up table is recited in paragraph 56, the information stored on the substrate is

the type of substrate connected to the substrate thickness by the table).

For claim 31: Regev et al. teaches the printhead assembly of claim 22. The

recitation that the "information is stored on an electronic tag or chip or as a barcode"

does not further limit the structure of the printhead assembly, which does not positively

recite the substrate as part of the assembly.

For claim 32: Regev et al. teaches the printhead assembly of claim 22 and further teaches that the driver **160, 180** comprises a motor **180** and the look up table comprises information to determine a value indicating the number of rotation of the motor necessary for printing the image-receiving substrate (see paragraph 62, the look-uip table determines the required circular motion of the motor, required circulation motion is rotation). However, it should also be noted that the information on a look-up-table is non-functional printed matter that may not be granted patentable weight.

For claim 33: Regev et al. teaches the printhead assembly of claim 22 and further teaches that the processor **240** includes a microprocessor that is configured to detect information stored on the image receiving substrate **8** (see paragraph 64, the processor **240** receives information from an unlabeled source about the substrate, the source can be considered the microprocessor).

For claim 35: Regev et al. teaches that the method of claim 34 wherein the driver **160, 180** comprises a motor **180** and the information comprises a number of rotation necessary for printing the desired substrate (see paragraph 62, the look-up table determines the required circular motion of the motor, required circulation motion is rotation).

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DAVID BANH whose telephone number is (571)270-

3851. The examiner can normally be reached on M-Th 9:30AM-8PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Judy Nguyen can be reached on (571)272-2258. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DHB

/Judy Nguyen/
Supervisory Patent Examiner, Art Unit 2854